# Spencer.



## Today's problems are complex. Tomorrow's will be even tougher. Make Spencer part of your solution.

## Spencer blowers and gas boosters – for the world as it is today, and tomorrow.

The 21st century is a world of promise ... and enormous challenge. Today, customers in the mining industry must extend their operations to increasingly remote parts of the globe to reach precious resources.

In the food processing industry, equipment is needed to prepare and pack food so it's fresh when it gets to tables halfway around the world.

And – more critical to society today than ever – water and wastewater treatment facilities and power plants around the world require processes that are green and sustainable.

Complex global problems like these call for unique expertise.

That is where, as it has for 120 years, The Spencer Turbine Company comes in.

The equipment solutions featured in these pages incorporate the latest in custom air and gas handling blowers and gas boosters, including single and multistage centrifugal designs, energy-efficient cast machines, and hermetically sealed gas boosters. The diversity and breadth of our product line meet applica-

tions in the broadest range of markets, including chemical; petrochemical; mining; power; environmental; pulp and paper; food and beverage; pharmaceutical; and water and wastewater treatment.

Our reputation for legendary customer satisfaction is what drives us.

Spencer's experts are dedicated to working with you to understand your exact requirements and how best to meet them. Our blowers and gas boosters can be engineered and designed to handle temperatures to 1100 °F (593 °C), inlet pressures to 500 psig (3447 kPa), and casing design pressures to 1000 psig (6895 kPa). When it comes to corrosive gases such as sulfides, halogens, acids, flue and stack gases, cyanides and ammonia, we manufacture in a wide range of metals including carbon steel, cast iron, aluminum, stainless steel, Hastelloy®, Inconel® and others. We can also package equipment on a common base and include custom electrical control panels. This makes installation and operation as efficient as possible.

Look inside for a Spencer blower or gas booster to fit your needs. For projects with additional requirements, contact us to discuss a custom solution.

Blowers and Gas Boosters with an Engineering Edge

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#### Blowers and Gas Boosters with an Engineering Edge



### Special Fabricated Blowers and Gas Boosters

Spencer's custom designs handle extreme gas handling applications, including corrosive and toxic gases such as sulfides, flue and stack gases, halogens and acids. Equipment can be designed for temperatures to 1100 °F (593 °C), casing design pressures to 1000 psig (6895 kPa), operating pressures to 500 psig (3447 kPa).



#### **Fabricated Multistage Centrifugal Blowers**

Spencer offers standard overhung, four-bearing overhung and four-bearing outboard multistage designs. Casing diameters are available from 14" to 88" (36 cm to 2.24 m), volumes to 30000 icfm (50977 m³/hr), pressures to 20 psig (138 kPa). Blowers can be fabricated from a variety of specialized metals to counter abrasion, corrosion or high temperatures.



#### Natural Gas Booster Skid Packages

Spencer's GasCube® natural gas booster skid package series is the equipment solution for efficiently delivering gas at higher pressure. It features a UL Listed hermetic gas booster and boosts pressure levels by as much as 83" wc (20.7 kPa) with volumes as high as 240000 cfh (6796 m³/hr).



### Hermetically Sealed Gas Boosters

Spencer offers gas boosters with hermetically sealed blower and motor to eliminate shaft leakage. This design provides a continuous gas flow around the explosion-proof motor, cooling the motor and extending its life. UL Listed natural gas boosters are available.



#### Digester Gas Booster Skid Packages

Spencer's custom designed systems move digester gas and raise its pressure to desired levels.

Packages are prepiped, prewired and packaged with all system accessories on a compact skid.

To deal with corrosive gases, the system is equipped with a multistage hermetically sealed gas booster featuring a stainless steel housing, anodized aluminum impellers and an Inconel® electrical connector.

#### Blowers and Gas Boosters with an Engineering Edge



#### **Single-Stage Centrifugal Blowers**

Spencer single-stage blowers are used in air handling equipment and in plant and process applications requiring uniform airflow over an entire volume range. Typical applications include pneumatic conveying, exhausting, combustion air delivery, ventilation, materials handling, air curtains, drying. Volumes to 50000 scfm (84950 m³/hr), pressure to 3.5 psig (24 kPa).



#### **Cast Multistage Centrifugal Blowers**

Spencer's Power Mizer® multistage cast centrifugal blowers have rugged cast iron and cast aluminum components for heavy-duty service. With uniquely shaped impellers and peak adiabatic efficiency up to 80%, these blowers are a preferred solution for energy efficient performance in 24/7 applications. A range of models to 35000 icfm (59465 m³/hr), 28 psig (193 kPa) is available.



#### **Special Regenerative Blowers**

Spencer Vortex® regenerative blowers can be customized for special applications requiring different surface treatments. They can be provided with Teflon® coatings, anodizing, white epoxy paint, stainless steel paint and custom paint colors. Bases can be fabricated from stainless steel and drilled with inspection ports. Special motors include explosion-proof, premium efficiency and chemical duty.



#### **Regenerative Blowers**

Spencer Vortex® single-stage regenerative blowers are ideal for compact installation to deliver clean, oil-free air. Quiet, pulsation-free, low maintenance operation with up to 645 scfm (1096 m³/hr) volume, 3.9 psig (27 kPa) pressure. Standard models equipped with UL Listed, CSA approved and CE compliant, TEFC motors.



Spencer's four-bearing overhung design, when belt-driven at speeds up to 5000 rpm, develops very high pressures and more than three times the volume achieved within a 24" (61 cm) casing. Ideal for OEM applications. Volumes to 1800 scfm (3058 m³/hr), pressure to 8 psig (55 kPa).





The 200,000 sq. ft. Spencer headquarters in Windsor, Connecticut USA houses the product design, R&D and testing operations and manufacturing facilities for Spencer blowers, vacuum systems and electrical control panels, plus administrative, sales and engineering offices.

### The Smart Way Forward for the 21st Century

The world is a very different place than it was in 1892 when our founder Ira Spencer introduced his innovative air handling solution to a new industry. Today's issues make the challenges of the last century seem almost quaint by comparison.

With the 21st century under way, the focus for our second hundred years is clear. We will continue to lead in the global market, focusing on innovation with lean principles, engaging our employees and our entire supply chain, and delivering smart, efficient, cost-effective equipment solutions.

#### **Technical Support and Services**

Your equipment solutions are based on the latest technologies available, developed through application studies in our in-house research and testing laboratory. More than a century of air and gas handling experience has led to our unique capability for high-efficiency, cost-effective approaches to the world's most critical industrial, municipal and commercial applications.

Additionally we provide system design and maintenance services, anywhere in the world. Our authorized sales representatives are backed by our in-house engineering staff, and as a team they evaluate your application and recommend an effective system based your near- and long-term needs. They are also available during installation, start-up and operation.

GasCube®, Power Mizer® and Vortex® are registered trademarks of The Spencer Turbine Company.



This strategically located network ensures Spencer-approved experts are close at hand whenever you need them.

Spencer experts stand ready to work closely with you. No matter how challenging the need, our blowers and gas boosters – as well as our full range of technical support and services – are suited to the world of today, and tomorrow.

In Australia, for product selection and sales assistance, please contact:

#### **Pneuvay Engineering**

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